APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/964,428	09/28/2001	Hiroshi Sasaki	32014-175198	1518

7590   11/30/2004

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EXAMINER
SKED, MATTHEW J

ART UNIT	PAPER NUMBER
2655	

DATE MAILED: 11/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

		Application No.	Applicant(s)
Office Action Summary		09/964,428	SASAKI, HIROSHI
		Examiner	Art Unit
		Matthew J Sked	2655

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL.**   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *15 November 2001* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All   b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date *9/28/01*.

4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____ .

DETAILED ACTION

Specification

1.   The title of the invention is not sufficiently descriptive. A new title is required that is more clearly indicative of the invention to which the claims are directed.

Drawings

2.   The drawings are objected to because in Fig. 3 the drawings do not agree with the specification. In block S11 of Fig. 3, it specifies that if cnt is less than equal to threshold k than to proceed to E2, however the specification on pages 10 lines 25-26 and page 11 line 1 specify the opposite. In Fig. 5, "toward" should be changed to – forward--, to be consistent with the Specification.

The objection to the drawings will not be held in abeyance.

3.   Figure 20a should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.121(d)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

4.   Claims 3, 5 and 6 are objected to because of the following informalities:

In claims 3 and 5, on pages 33 and 34, lines 16 and 21, respectively, the

applicant recites "the extracted frequency vectors". This would suggest that extracted

frequency vectors had been mentioned previously, but they have not. Therefore, "the"

should be removed.

Claim 5 also states on lines 24 and 25 "a frequency vector calculate for

calculating frequency of characteristic symbols". This should be changed to –a

frequency vector calculator for calculating the frequency of characteristic symbols--.

In claim 6, the applicant recites "extracting and frequency vectors" on line 9. This

should be changed to –extracting the frequency vectors--.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

5.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

6.   Claims 1-6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dutta

et al. (U.S. Pat. 6,453,294) in view of Challapali (U.S. Pat. Pub. 2002/01940006).

As per claim 1, Dutta teaches a text to speech synthesizer, comprising:

a facial character reading assignment unit for assigning sounds to character string portions of text analysis results determined to correspond to facial characters (converts emoticons to sound, col. 3, lines 65-67);

a speech synthesizer for outputting synthesized speech based on the analysis results of the text analyzer (text-to-audio transcoding, col. 3, lines 60-61), wherein the facial character reading assignment unit is constituted by;

a facial character determining unit for determining whether or not a symbol is a symbol constituting a facial character (converts emoticons to sound, therefore necessarily detecting them, col. 3, lines 65-67);

determines if text is a command using an outline symbol table (commands placed in brackets, col. 4, lines 16-18); and

a characteristic extraction unit for extracting characteristic symbols used in facial characters from facial character strings determined to be for facial characters and assigning facial characters corresponding to characteristic symbols (multiple emoticons are recognized that are made up of different characters hence the differences in the characters would differentiate the emoticons, col. 3, lines 47-53).

Dutta does not teach analyzing Japanese text data.

However, the Examiner takes Official Notice that analyzing Japanese text for synthesis is well-known in the art. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify the system of Dutta to analyze Japanese text data because it would allow the system to be used by those who do not speak English.

Dutta does not teach using an outline symbol table to determine whether a symbol is a symbol constituting a facial character.

It would have been obvious to one of ordinary skill in the art at the time of invention to modify the system of Dutta to determine whether a symbol is a symbol constituting a facial character using the outline symbols for the commands because this would allow the system to quickly and easily differentiate between facial characters and text so that these facial characters are not processed as regular text.

Dutta does not teach a reading selection unit for outputting readings allotted to extracted reading numbers.

However, the Examiner takes Official Notice that storing data with a pointer to corresponding data is common in the art. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify the system of Dutta so that the reading selection unit to output readings allotted to extracted reading numbers because it would save memory.

Dutta does not teach the readings being allotted to the facial character strings according to the number of appearances of characteristic symbols in the facial characters.

Challapali teaches the readings being allotted to the facial character strings according to the number of appearances of characteristic symbols in the facial characters (emoticons have repeated symbols hence the number of symbols would influence the allotment of the reading, Appendix).

It would have been obvious to one of ordinary skill in the art at the time of invention to modify the system of Dutta to have the readings being allotted to the facial character strings according to the number of appearances of characteristic symbols in the facial characters as taught by Challapali because determining the number of symbols in the facial characters would be a quick method to reduce the searching for the corresponding reading.

7.   As per claim 2, Dutta teaches the facial character reading assignment unit decides upon readings for facial characters using the steps of:

scanning the text and detecting a left and right outline symbol listed in the outline symbol table (detect left and right brackets to determine command, col. 4, lines 16-18);

extracting symbols exhibiting characteristics of eyes from a character string portion (emoticons have symbols that represent the eyes, col. 3, lines 47-53); and

referring to the characteristic symbol table and the reading table, and deciding upon a corresponding facial character reading from readings for characters exhibiting eyes (converts emoticons which exhibit eyes to sound, therefore necessarily detecting them, col. 3, lines 65-67).

Dutta does not teach detecting a right outline symbol within a range of a prescribed number of characters if a left outline symbol is detected.

Challapali suggests the facial characters are only a few symbols in length (emoticons have a maximum of six characters, Appendix).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify the system of Dutta to detect a right outline symbol within a

range of a prescribed number of characters if a left outline symbol is detected because

it would limit the search for the facial characters hence speeding up processing.

8.   As per claim 3, Dutta teaches a text to speech synthesizer, comprising:

a facial character reading assignment unit for assigning sounds to character

string portions of text analysis results determined to correspond to facial characters

(converts emoticons to sound, col. 3, lines 65-67);

a speech synthesizer for outputting synthesized speech based on the analysis

results of the text analyzer (text-to-audio transcoding, col. 3, lines 60-61), wherein the

facial character reading assignment unit is constituted by;

determines if text is a command using an outline symbol table (commands

placed in brackets, col. 4, lines 16-18);

wherein the facial character reading assignment unit is constituted by a facial

character determining unit for determining whether or not a symbol is a symbol

constituting a facial character (converts emoticons to sound, therefore necessarily

detecting them, col. 3, lines 65-67); and

a characteristic extraction unit for extracting characteristic symbols used in facial

characters using a characteristic symbol table from character strings determined to be

facial characters (multiple emoticons are recognized and these would necessarily be in

a symbol table for searching, col. 3, lines 47-53).

Dutta does not teach analyzing Japanese text data.

However, the Examiner takes Official Notice that analyzing Japanese text for

synthesis is well-known in the art. Therefore, it would have been obvious to one of

ordinary skill in the art at the time of invention to modify the system of Dutta to analyze

Japanese text data because it would allow the system to be used by those who do not

speak English.

Dutta does not teach using an outline symbol table to determine whether a

symbol is a symbol constituting a facial character.

It would have been obvious to one of ordinary skill in the art at the time of

invention to modify the system of Dutta to determine whether a symbol is a symbol

constituting a facial character using the outline symbols for the commands because this

would allow the system to quickly and easily differentiate between facial characters and

text so that these facial characters are not processed as regular text.

Dutta does not teach that the characteristic symbol table consists of

characteristic symbols and number of groups the characteristic symbols belong to.

However, the Examiner takes Official Notice that storing data with pointers to

corresponding data is common in the art. Therefore, it would have been obvious to one

of ordinary skill in the art at the time of invention to modify the system of Dutta so that

the characteristic symbol table consists of characteristic symbols and number of groups

the characteristic symbols belong to because it would save memory.

Dutta does not teach a reading selection unit for selecting and outputting

readings for typical vectors most similar to the extracted frequency vectors and that the

characteristic extraction unit comprises a frequency vector calculator for calculating

frequencies of characteristic symbols within the facial characters and making frequency

vectors and a normalization processor for normalizing the frequency vectors.

Challapali suggests the facial characters would have different punctuation counts (emoticons would have different punctuation counts because the characters that comprise them differ, Appendix).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify the system of Dutta to have a reading selection unit for selecting and outputting readings for typical vectors most similar to the extracted frequency vectors and that the characteristic extraction unit comprises a frequency vector calculator for calculating frequencies of characteristic symbols within the facial characters and making frequency vectors and a normalization processor for normalizing the frequency vectors because it would be a robust alternative to matching character strings.

9.   As per claim 4, Dutta teaches the facial character reading assignment unit decides upon readings for facial characters using the steps of:

scanning the text and detecting a left outline symbol and right outline symbol table (detect left and right brackets to determine command, col. 4, lines 16-18); and

extracting characteristic symbols used in facial characters from character strings encompassed by the left outline symbol and the right outline symbol (converts emoticons to sound, therefore necessarily detecting them, col. 3, lines 65-67).

Dutta does not teach extracting and normalizing frequency vectors indicating numbers of appearances of the characteristic symbols, selecting typical vectors most similar to the normalized frequency vectors and taking readings allotted to the typical vectors as facial character readings.

Challapali suggests the facial characters would have different punctuation counts (emoticons would have different punctuation counts because the characters that comprise them differ, Appendix).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify the system of Dutta for extracting and normalizing frequency vectors indicating numbers of appearances of the characteristic symbols, selecting typical vectors most similar to the normalized frequency vectors and taking readings allotted to the typical vectors as facial character readings because it would be a robust alternative to matching character strings.

10.   As per claim 5, Dutta teaches a text to speech synthesizer, comprising:

a facial character reading assignment unit for assigning sounds to character string portions of text analysis results determined to correspond to facial characters (converts emoticons to sound, col. 3, lines 65-67);

a speech synthesizer for outputting synthesized speech based on the analysis results of the text analyzer (text-to-audio transcoding, col. 3, lines 60-61), wherein the facial character reading assignment unit is constituted by;

determines if text is a command using an outline symbol table (commands placed in brackets, col. 4, lines 16-18);

wherein the facial character reading assignment unit is constituted by a facial character determining unit for determining whether or not a symbol is a symbol constituting a facial character (converts emoticons to sound, therefore necessarily detecting them, col. 3, lines 65-67); and

a characteristic extraction unit for extracting characteristic symbols used in facial characters using a characteristic symbol table from character strings determined to be facial characters (multiple emoticons are recognized and these would necessarily be in a symbol table for searching, col. 3, lines 47-53).

Dutta does not teach analyzing Japanese text data.

However, the Examiner takes Official Notice that analyzing Japanese text for synthesis is well-known in the art. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify the system of Dutta to analyze Japanese text data because it would allow the system to be used by those who do not speak English.

Dutta does not teach using an outline symbol table to determine whether a symbol is a symbol constituting a facial character.

It would have been obvious to one of ordinary skill in the art at the time of invention to modify the system of Dutta to determine whether a symbol is a symbol constituting a facial character using the outline symbols for the commands because this would allow the system to quickly and easily differentiate between facial characters and text so that these facial characters are not processed as regular text.

Dutta does not teach that the characteristic symbol table is lined up based on similarities between shape characteristics.

Challapali suggests the facial character table is lined up based on similarities between shape characteristics (emoticons lined up in order of appearance, Appendix).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify the system of Dutta so that the characteristic symbol table is lined up based on similarities between shape characteristics because it would limit searching for similar characteristic symbols hence improving system speed.

Dutta does not teach the characteristic extraction unit comprises a frequency vector calculator for calculating the frequency of characteristic symbols within the facial characters and extracting frequency vectors and a normalization processor for normalizing frequency vectors.

Challapali suggests the facial characters would have different punctuation counts (emoticons would have different punctuation counts because the characters that comprise them differ, Appendix).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify the system of Dutta to have characteristic extraction unit comprises a frequency vector calculator for calculating the frequency of characteristic symbols within the facial characters and extracting frequency vectors and a normalization processor for normalizing frequency vectors because it would be a robust alternative to matching character strings.

11.   As per claim 6, Dutta teaches:

scanning the text and detecting a left outline symbol and right outline symbol (detect left and right brackets to determine command, col. 4, lines 16-18); and

extracting characteristic symbols used in facial characters from character strings encompassed by the left outline symbol and the right outline symbol (converts emoticons to sound, therefore necessarily detecting them, col. 3, lines 65-67).

Dutta does not teach extracting the frequency vectors indicating numbers of appearances of the characteristic symbols and normalizing the frequency vectors after filtering processing, selecting typical vectors most similar to the normalized frequency vectors, and taking readings allotted to the typical vectors as facial character readings.

Challapali suggests the facial characters would have different punctuation counts (emoticons would have different punctuation counts because the characters that comprise them differ, Appendix).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify the system of Dutta for extracting the frequency vectors indicating numbers of appearances of the characteristic symbols and normalizing the frequency vectors after filtering processing, selecting typical vectors most similar to the normalized frequency vectors, and taking readings allotted to the typical vectors as facial character readings because it would be a robust alternative to matching character strings.

Conclusion

12.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Chin et al. (U.S. Pat. Pub. 2001/0029455A1), Pentheroudakis et al. (U.S. Pat. Pub. 2003/0023425A1), Kurlander et al. ("Comic Chat"), Lavine et al. (U.S.
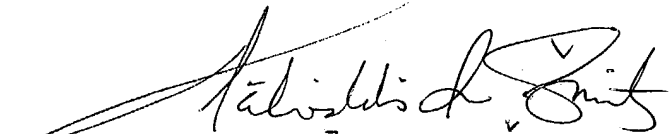
Pat. Pub. 2001/0049596A1), Powell (U.S. Pat. 6,157,905), Richardson et al. (U.S. Pat.

5,812,126), Rosenblatt et al. (U.S. Pat. Pub. 2002/0007276), and Sun (U.S. Pat.

5,802,482) teach speech processing systems that extract facial characters from text.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Matthew J Sked whose telephone number is (703) 305-

8663. The examiner can normally be reached on Mon-Fri (8:00 am - 4:30 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Talivaldis Smits can be reached on (703) 306-3011. The fax phone number

for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

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you have questions on access to the Private PAIR system, contact the Electronic

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11/23/04

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PRIMARY EXAMINER